

CLAIMS

What is claimed is:

1. A system for testing optoelectronic devices, the system comprising:
 - a burn-in rack mountable within a support structure, said burn-in rack supports a plurality of optoelectronic devices during burn-in testing and life testing, said burn-in rack with said plurality of optoelectronic devices being disposable in either a burn-in oven or within said support structure for life testing; and
 - a detector assembly mounted to said support structure, said detector assembly comprising a plurality of detectors, each of said plurality of detectors aligning with one of said plurality of optoelectronic devices to detect an output of each of said plurality of optoelectronic devices during the testing.
2. A system as recited in claim 1, wherein said system further comprising a computer in electrical communication with at least one of said burn-in rack and said detector assembly.
3. A system as recited in claim 2, wherein said computer controls said life testing and said burn-in testing.
4. A system as recited in claim 1, wherein said burn-in rack comprises:
 - a rack base that supports a circuit board; and
 - at least one diode support disposed from and supported by said rack base, said at least one diode support supporting said plurality of optoelectronic devices.

5. The system as recited in claim 1, wherein said plurality of detectors are organized in an array.

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6. A system for life testing laser diodes, comprising:
 - a burn-in rack having a plurality of laser diode holders and electrical signal connectors for electrically coupling laser diodes mounted in said holders to a first electrical connector;
 - a test apparatus configured to hold said burn-in rack and having optical detectors arranged to receive light from said laser diodes mounted to said burn-in rack and couple output signals from said optical detectors to a second electrical connector;
 - a computer coupled to said first and second electrical connectors, said computer creating a drive current supplied to each laser diode and measuring the light output from said optical detectors.

7. A system as recited in claim 6, wherein said burn-in rack comprises:
 - a rack base that supports a circuit board; and
 - at least one diode support disposed from and supported by said rack base, said at least one diode support supporting said plurality of laser diode holders.

8. The system as recited in claim 6, wherein said plurality of detectors are organized in an array.
9. The system as recited in claim 6, wherein said electrical connectors are edge connectors.

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10. The system as recited in claim 6, wherein said burn-in rack slidably cooperates with said test apparatus.

11. The system as recited in claim 6, wherein said burn-in rack is capable of being disposed within a burn-in oven.

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12. A system for testing optoelectronic devices, the system comprising:

means for supporting a plurality of optoelectronic devices that are capable of undergoing a burn-in process;

means for detecting one or more operating characteristics of said plurality of optoelectronic devices; and

means, electrically coupled to said means for supporting and said means for detecting, for delivering a drive current to each of said plurality of optoelectronic devices and for measuring an output from said means for detecting.

13. The system as recited in claim 12, wherein said means for supporting comprises a burn-in rack.

14. The system as recited in claim 13, wherein said burn-in rack comprises a rack base and at least one diode support mounted to said rack base.

15. The system as recited in claim 14, wherein said burn-in rack further comprises at least circuit board electrically connected to a plurality of optoelectronic device holders and said plurality of optoelectronic devices disposed within said plurality of optoelectronic device holders.

16. The system as recited in claim 12, wherein said means for detecting comprises a detector assembly having a plurality of detectors.

17. The system as recited in claim 16, wherein said plurality of detectors detect electromagnetic waves propagated from said plurality of optoelectronic devices.

18. The system as recited in claim 12, wherein said means for detecting comprises a monitor detector integrated within each of said plurality of optoelectronic devices.

19. The system as recited in claim 12, wherein said means for delivering comprising a computer electrically connected to said plurality of optoelectronic devices and said means for detecting.

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20. A method of testing laser diodes, comprising:

a step for mounting a burn-in rack having a plurality of optoelectronic devices to a test apparatus having an array of optical detectors;

a step for providing a drive current to each of said plurality of optoelectronic devices;

a step for measuring the optical power output of each optoelectronic device using said optical detectors; and

a step for storing optical characterization data for each of said plurality of optoelectronic devices.

21. The method as recited in claim 20, further comprising a step for characterizing each optoelectronic device based upon a monitor detector integrated with each optoelectronic device.

22. The method as recited in claim 20, further comprising a step for calibrating said integrated detector and said optical detectors.

23. The method as recited in claim 20, further comprising a step for removing said burn-in rack and performing a burn-in process.

24. The method as recited in claim 20, further comprising a step for removing each of said plurality of optoelectronic devices following an additional burn-in process.